

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 77 WEST JACKSON BOULEVARD CHICAGO, IL 60604-3590

SEP 2 1 2017

REPLY TO THE ATTENTION OF

<u>CERTIFIED MAIL</u> RETURN RECEIPT REQUESTED

Melissa Putman Ingredion Incorporated 1515 South Drover Avenue Indianapolis, Indiana 46221

Re:

Notice of Violation Ingredion Incorporated Indianapolis, Indiana

Dear Ms. Putman:

The U.S. Environmental Protection Agency is issuing the enclosed Notice of Violation (NOV) to Ingredion Incorporated (you) under Section 113(a)(1) of the Clean Air Act (CAA), 42 U.S.C. § 7413(a)(1). We find that you have violated your Title V Operating Permits at your Indianapolis, Indiana facility.

Section 113 of the Clean Air Act gives us several enforcement options. These options include issuing an administrative compliance order, issuing an administrative penalty order and bringing a judicial civil or criminal action.

We are offering you an opportunity to confer with us about the violations alleged in the NOV. The conference will give you an opportunity to present information on the specific findings of violation, any efforts you have taken to comply and the steps you will take to prevent future violations. In addition, in order to make the conference more productive, we encourage you to submit to us information responsive to the NOV prior to the conference date.

Please plan for your facility's technical and management personnel to attend the conference to discuss compliance measures and commitments. You may have an attorney represent you at this conference.

The EPA contact in this matter is Dakota Prentice. You may call him at (312) 886-6761 to request a conference. You should make the request within 10 calendar days following receipt of this letter. We should hold any conference within 30 calendar days following receipt of this letter.

Sincerely,

Edward Nam

Director

Air and Radiation Division

Enclosure

cc: Phil Perry, Indiana Department of Environmental Management

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION 5

IN THE MATTER OF:)	
Ingredion Incorporated) NOTICE OF VIOLAT	ION
Indianapolis, Indiana)	
Proceedings Pursuant to) EPA-5-17-IN-12	
Section 113(a)(1))	
of the Clean Air Act,)	
42 U.S.C. § 7413(a)(1))	

NOTICE OF VIOLATION

The U.S. Environmental Protection Agency (EPA) is issuing this Notice of Violation (NOV) under Section 113(a)(1) of the Clean Air Act, 42 U.S.C. § 7413(a)(1). EPA finds that Ingredion Corporation (Ingredion) has violated its Title V Operating Permits at its Indianapolis, Indiana facility, as follows:

Relevant Statutory and Regulatory Background

Federal Title V Requirements

- 1. Section 502(a) of the CAA, 42 U.S.C. § 7661a(a), provides that it is unlawful for any person to, among other things, operate a major source subject to Title V except in compliance with a Title V permit after the effective date of any permit program approved or promulgated under Title V of the Act.
- 2. Pursuant to Section 502(b) of the CAA, 42 U.S.C. § 7661a(b), EPA promulgated regulations establishing the minimum elements of a Title V permit program to be administered by any air pollution control agency. See 57 Fed. Reg. 32295 (July 21, 1992). Those regulations are codified at 40 C.F.R. Part 70.
- 3. Section 502(d) of the CAA, 42 U.S.C. § 7661a(d), provides that each state must submit to EPA a permit program meeting the requirements of Title V.
- 4. On December 4, 2001, EPA granted full approval to Indiana's Title V operating permit program, set forth at 326 IAC 2-7. See 66 Fed. Reg. 62969.

Title V Permit Requirements

- 5. On April 16, 2010, the Indiana Department of Environmental Management (IDEM) issued a Part 70 Operating Permit Renewal (2010 Title V Permit) to Ingredion.
- 6. Condition D.2.7(a) of the 2010 Title V Permit states if the pressure drop across the baghouse at the West Corn Truck Dump (56-1) and the Hammer Mill (5502-3) is outside

- the normal range of 1.0 to 8.0 inches of water, Ingredion shall take reasonable response steps.
- 7. Condition D.2.7(a) of the 2010 Title V Permit states Ingredion shall record the pressure drop across the baghouses used in conjunction with the Hammer Mill (5502-3) at least once per day when the unit is in operation.
- 8. Condition D.2.7(b) of the 2010 Title V Permit states Ingredion shall record the total static pressure across the baghouses used in conjunction with the Germ Bin (5503-2) at least once per day when the unit is in operation.
- 9. Condition D.2.10(c) of the 2010 Title V Permit states Ingredion shall maintain a daily record of the pressure drop across the baghouses used in conjunction with the Hammer Mill (5502-3) and the Germ Bin (5503-2).
- 10. On May 6, 2015, IDEM issued a Minor Source Modification to a Part 70 Source (May 2015 Title V Permit) to Ingredion.
- 11. Condition D.1.4(a) of the May 2015 Title V Permit states the volatile organic compound (VOC) emissions from the Gluten Dryer (5502-1C) shall be controlled by a regenerative thermal oxidizer.
- 12. Condition D.1.6(a) of the May 2015 Title V Permit states the regenerative thermal oxidizer (RTO), or an equivalent thermal oxidation unit, shall be in operation and control particulate and VOC emissions from the Gluten Dryer (5502-1C) at all times when the unit is in operation.
- 13. Condition D.1.6(c) of the May 2015 Title V Permit states scrubbers shall be in operation and control particulate emissions from emission units including #5 Starch Flash Dryer (575-2) at all times when the unit is in operation.
- 14. Condition D.3.5(a)(3) of the May 2015 Title V Permit states Ingredion shall close the degreaser cover whenever parts are not being handled in the degreaser.
- 15. On September 22, 2015, IDEM issued a Part 70 Operating Permit Renewal (September 2015 Title V Permit) to Ingredion.
- 16. Condition D.1.10(e) of the September 2015 Title V Permit states the instruments used for determining the pressure drop at the scrubbers controlling emissions from the #3 Starch Flash Dryer (40-2), #2 Starch Flash Dryer (40-3), #1 Starch Flash Dryer (40-4), #4 Starch Flash Dryer (575-1), #5 Starch Flash Dryer (575-2), #6 Starch Flash Dryer (575-3), #1 Spray Dryer (5549-1), and #2 Spray Dryer (5549-2) shall be calibrated or replaced at least once every six months.
- 17. Condition D.1.14(i) of the September 2015 Title V Permit states Ingredion shall maintain the records of the daily fan amperage for the RTO (5502-1D) and the records shall include when readings were not taken and the reason for the lack of readings.

- 18. Condition D.2.8 of the September 2015 Title V Permit states the instruments used for determining the pressure at the baghouses controlling emissions from the DSE Bag Slitter (42-10), Corn Truck Dump (56-1), DSW Packing Fugitive Dust Collector (71-7), Hammer Mill (5502-3), Agglomerator (5549-13), #2 Fugitive Dust Collector (5549-20), and Line 1 Fugitive Dust Collector (5549-21) shall be calibrated or replaced at least once every six months.
- 19. Condition D.3.7 of the September 2015 Title V Permit states Ingredion shall monitor and record the pressure drop across the baghouse used to control emissions from the Blending Bin (152-15) and when the pressure drop is outside the normal range (1.0 8.0 inches of water), Ingredion shall take a reasonable response.
- 20. Condition D.3.7 of the September 2015 Title V Permit states the instruments used for determining the pressure drop at the baghouses controlling emissions from the Starch Cooling and Conveying System (TF41818), Blending Bin (152-15), Starch Cooling and Conveying System (TF41820), and FBR1 Cooling System (TR31913) shall be calibrated or replaced at least once every six months.
- 21. On June 8, 2016, IDEM issued an Administrative Amendment to a Part 70 Operating Permit Renewal (June 2016 Title V Permit) to Ingredion.
- 22. Condition D.1.9(a) of the June 2016 Title V Permit states when the monitored pH of the first effect wash water system used to control emissions from the Feed Dryer (5502-1A) is outside the normal range (a pH of greater than 6.5 or a lower bound established from the latest stack test), Ingredion shall take a reasonable response.
- 23. Condition D.1.10(d) of the June 2016 Title V Permit states when the scrubber make-up rate is outside the normal range (≥ 10 gallons per minute) at emission unit #6 Starch Flash Dryer (575-3), Ingredion shall take a reasonable response.
- 24. Condition D.2.8 of the June 2016 Title V Permit states Ingredion shall monitor and record the pressure drop across the baghouses used to control emissions from the Hammer Mill (5502-3) and Germ Bin (5503-2) and when the pressure drop is outside the normal range, Ingredion shall take a reasonable response.
- 25. Condition D.2.11(d) of the June 2016 Title V Permit states Ingredion shall maintain the records of the daily pressure drop readings across the baghouses controlling emissions from the Hammer Mill (5502-3) and the Germ Bin (5503-2) and the records shall include when pressure drop readings were not taken and the reason for the lack of readings.
- 26. On October 14, 2016, IDEM issued a Part 70 Operating Permit Renewal as Significant Modification No. 097-36989-00042 (October 2016 Title V Permit) to Ingredion.
- 27. Condition D.2.8 of the October 2016 Title V Permit states Ingredion shall monitor and record the pressure drop across the baghouses used to control emissions from the Hammer Mill (5502-3) and Germ Bin (5503-2) and when the pressure drop is outside the normal range, Ingredion shall take a reasonable response.

- 28. Condition D.2.11(d) of the October 2016 Title V Permit states Ingredion shall maintain the records of the daily pressure drop readings across the baghouses controlling emissions from the Hammer Mill (5502-3) and the Germ Bin (5503-2) and the records shall include when pressure drop readings were not taken and the reason for the lack of readings.
- 29. On May 4, 2017, IDEM issued a Part 70 Operating Permit Renewal as Significant Permit Modification No.: 097-37637-00042 (2017 Title V Permit) to Ingredion.
- 30. Condition D.1.1(a)(4) of the 2017 Title V Permit limits the combined emissions at the RTO stack (5502-7) from the Feed Dryer (5502-1A), Germ Dryer (5502-1B), Gluten Dryer (5502-1C), and Regenerative Thermal Oxidizer (RTO, 5502-1D) for particulate matter (PM) and particulate matter less than 10 micrometers (PM10) as shown below:

Unit	PM Limits			PM10 Limits		
	gr/dscfl	lb/hr²	ton/yr	gr/dscf	lb/hr	ton/yr
Feed Dryer						
5502-1A						
Germ Dryer						
5502-1B	0.0114	4.533	19.855	0.0114	4.533	19.855
Gluten Dryer						
5502-1C						
RTO						
5502-1D						

gr/dscf = grains per dry standard cubic foot

- 31. Condition D.1.1(d) of the 2017 Title V Permit limits the combined VOC emissions from the Feed Dryer (5502-1A), Germ Dryer (5502-1B), Gluten Dryer (5502-1C), and RTO (5502-1D) to 4.89 lbs/hr.
- 32. Condition D.1.5(c) of the 2017 Title V Permit states that the facility shall employ Best Available Control Technology (BACT), pursuant to 326 IAC 8-1-6, for the following emission units the Feed Dryer (5502-1A), Germ Dryer (5502-1B), and Gluten Dryer (5502-1C), which has been determined to be a combined VOC emission limit of 4.89 lbs/hr.

^{2.} lb/hr = pounds per hour

33. Condition D.1.2 of the 2017 Title V Permit states that, "...the source shall limit the source-wide potential to emit of any single hazardous air pollutant (HAP) to less than ten (10) tons per twelve (12) consecutive month period and the potential to emit of any combination of HAPs to less than twenty-five (25) tons per twelve (12) consecutive month period, and shall render the requirements 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants) not applicable and shall render the source minor under Section 112 of the Clean Air Act."

Relevant Factual Background

- 34. Ingredion owns and operates a wet corn milling plant at 1515 South Drover Street, in Indianapolis, Indiana.
- 35. EPA inspected the Ingredion facility on July 21, 2015 (2015 Inspection).
- 36. During the 2015 Inspection, EPA observed material exiting the scrubber controlling emissions from #5 Starch Flash Dryer (575-2).
- 37. EPA issued CAA Section 114 Information Requests to Ingredion on: May 13, 2016; and March 8, 2017 (2017 Information Request).
- In response to the 2017 Information Request, Ingredion conducted performance testing on May 23 and 24, 2017 that included testing at the RTO stack (5502-7) and #2 Starch Flash Dryer (40-3) (2017 Performance Test).
 - 39. Ingredion utilized various test methods during the 2017 Performance Test at the RTO stack, including EPA Methods 5 and 202. In an email dated April 27, 2017, an Ingredion representative stated, among other things, that the results from Methods 5 and 202 will be assumed to be PM10 (Ingredion Email).
 - 40. The 2017 Performance Test identified a PM/PM10 combined emission rate of 0.019 gr/dscf, 8.31 lb/hr, and 36.39 tons/yr at the RTO stack (5502-7).
 - 41. The 2017 Performance Test included VOC testing at the RTO stack outlet (5502-7) using EPA Methods 18 and 25A. EPA Method 18 testing included a list of compounds identified in the Ingredion Email as being "expected/could be present". The relevant test results are shown below:

Compound(s)	EPA Method	Emission Rate	Units
VOCs	25A	3.698	lb C/hr
VOCs	18	< 4.41	lbs VOCs/hr

42. EPA compared the results of the simultaneous EPA Method 18 and EPA Method 25A tests. The comparison shows that the rate from the EPA Method 18 test is biased low by

- approximately 36%. This demonstrates that the compounds described as "expected/could be present" in the Ingredion Email do not adequately describe the emissions exiting the RTO stack (5502-7).
- 43. EPA calculates the VOC emission rate from the RTO stack (5502-7) to be 8.137 lbs/hr based on the EPA Method 25A test and standard adjustments for molecular weight.
- 44. The 2017 Performance Test included propylene oxide testing at #2 Starch Flash Dryer (40-3) using EPA Method 18.
- 45. The 2017 Performance Test identified a propylene oxide emission rate of 0.409 lbs/hr or on an annual basis a potential to emit (PTE) of 1.79 tons of propylene oxide per year from #2 Starch Flash Dryer (40-3).
- 46. Propylene oxide is listed as a HAP in Section 112(b) of the CAA.
- 47. The 2017 Title V Permit states that the PTE for an individual HAP is 9.04 ton/yr of propylene oxide. The PTE calculations did not account for propylene oxide emissions from any starch dryers.
- 48. Based on the HAP emission rate from the 2017 Performance Test and the PTE data presented in the 2017 Title V Permit, Ingredion is a major source for HAPs.

IDEM - 2015 Enforcement Referral

- 49. On June 30, 2015, and July 1, 2015, IDEM conducted an inspection of the Ingredion facility (IDEM Inspection).
- 50. On August 13, 2015, IDEM referred multiple alleged violations to EPA.
- 51. During the IDEM Inspection, IDEM representatives observed emissions from the Gluten Dryer (5502-1C) bypassing the RTO.
- 52. During the IDEM Inspection, IDEM representatives observed the cover for the degreaser open while the unit was not being used.
- 53. Ingredion's first quarterly report for 2015 reported the pressure drop at the baghouse controlling emissions at the West Corn Truck Dump (56-1) outside of the range of 1.0 to 8.0 inches of water with no corrective action taken on March 9 and 10, 2015.
- 54. Ingredion's first quarterly report for 2015 reported the pressure drop at the baghouse controlling emissions at the Hammer Mill (5502-3) was outside of the operating range for 20 days during March 2015 with no corrective action taken.
- 55. Ingredion's first quarterly report for 2015 reported that on March 14, 2015, pressure drops were not taken or recorded at the baghouses controlling the emissions from the Hammer Mill (5502-3) and the Germ Bin (5503-2).

IDEM - 2017 Enforcement Referral

- 56. In 2017, IDEM reviewed Ingredion's 2016 Annual Certification Report.
- 57. On June 15, 2017, IDEM referred multiple alleged violations to EPA.
- 58. Ingredion's 2016 Annual Certification Report revealed the instruments used for determining the pressure drop at the scrubbers controlling emissions from the #3 Starch Flash Dryer (40-2), #2 Starch Flash Dryer (40-3), #1 Starch Flash Dryer (40-4), #4 Starch Flash Dryer (575-1), #5 Starch Flash Dryer (575-2), #6 Starch Flash Dryer (575-3), #1 Spray Dryer (5549-1), and #2 Spray Dryer (5549-2) were not calibrated or replaced during the second quarter of 2016.
- 59. Ingredion's 2016 Annual Certification Report revealed the RTO (5502-1D) fan amperage was not recorded on April 17 and May 29, 2016, and no reasons were recorded for the lack of readings.
- 60. Ingredion's 2016 Annual Certification Report revealed the instruments used for determining the pressure drop at the baghouses controlling emissions from the DSE Bag Slitter (42-10), Corn Truck Dump (56-1), DSW Packing Fugitive Dust Collector (71-7), Hammer Mill (5502-3), Agglomerator (5549-13), #2 Fugitive Dust Collector (5549-20), and Line 1 Fugitive Dust Collector (5549-21) were not timely calibrated or replaced during the second quarter of 2016.
- 61. Ingredion's 2016 Annual Certification Report revealed the pressure drop of the baghouse controlling emissions from emission unit Blending Bin (152-15) was below the permitted range from January 11-12 and January 15-17, 2016, and no corrective actions or response steps were conducted.
- 62. Ingredion's 2016 Annual Certification Report revealed the instruments used for determining the pressure drop at the baghouses controlling emissions from the Starch Cooling and Conveying System (TF41818), Blending Bin (152-15), Starch Cooling and Conveying System (TF41820), and FBR1 Cooling System (TR31913) were not calibrated or replaced during the second quarter of 2016.
- 63. Ingredion's 2016 Annual Certification Report revealed the pH of the first effect wash water system used to control emissions from the Feed Dryer (5502-1A) was outside the operational range determined in the last stack test on September 1 and 3, 2016, and Ingredion failed to conduct corrective actions or response steps.
- 64. Ingredion's 2016 Annual Certification Report revealed the water make-up rate of the scrubber controlling #6 Starch Flash Dryer (575-3) was less than the permitted limit on August 22 and 23, 2016, and Ingredion failed to conduct corrective actions or response steps.
- 65. Ingredion's 2016 Annual Certification Report revealed on September 10, 2016, Ingredion failed to record the pressure drop across the baghouse used to control emissions from the Hammer Mill (5502-3).

- 66. Ingredion's 2016 Annual Certification Report revealed that the pressure drop across the baghouse used to control the emissions from the Germ Bin (5503-2) was greater than the permitted limit on September 1, 2016 and was not recorded on September 10, 2016.
- 67. Ingredion's 2016 Annual Certification Report revealed the pressure drop across the baghouse controlling emissions from the Hammer Mill (5502-3) and Germ Bin (5503-2) was not recorded on December 17, 2016.

Violations

Violation Observed During EPA Inspection

68. Ingredion failed to control particulate emissions from #5 Starch Flash Dryer (575-2) during the 2015 Inspection, in violation of Condition D.1.6(c) of the May 2015 Title V Permit.

Violations from EPA Requested Stack Testing

- 69. Ingredion failed to limit the combined emissions from the Feed Dryer (5502-1A), Germ Dryer (5502-1B), Gluten Dryer (5502-1C), and RTO (5502-1D) for PM and PM10 emissions to less than or equal to 0.0114 gr/dscf, 4.533 lb/hr, and 19.855 ton/yr, in violation of Condition D.1.1(a)(4) of the 2017 Title V Permit.
- 70. Ingredion failed to limit the combined VOC emissions from the Feed Dryer (5502-1A), Germ Dryer (5502-1B), Gluten Dryer (5502-1C), and RTO (5502-1D) to less than or equal to 4.89 lbs/hr, in violation of Condition D.1.1(d) of the 2017 Title V Permit.
- 71. Ingredion failed to limit the combined VOC emissions from the Feed Dryer (5502-1A), Germ Dryer (5502-1B), and Gluten Dryer (5502-1C) to less than or equal to 4.89 lbs/hr, in violation of Condition D.1.5(c) of the 2017 Title V Permit.
- 72. Ingredion failed to limit the source-wide PTE of any individual HAP to less than 10 tons per 12 consecutive month period, in violation of Condition D.1.2 of the 2017 Title V Permit.

2015 IDEM Referred Violations

- 73. Ingredion failed to control all emissions from the Gluten Dryer (5502-1C) with the RTO during the IDEM Inspection, in violation of Conditions D.1.4(a) and D.1.6(a) of the May 2015 Title V Permit.
- 74. Ingredion failed to close the degreaser cover when the unit was not in use during the IDEM Inspection, in violation of Condition 3.5(a)(3) of the May 2015 Title V Permit.
- 75. Ingredion failed to take reasonable response steps to out of range pressure drop events at the baghouse controlling emissions at the West Corn Truck Dump (56-1), in violation of Condition D.2.7(a) of the 2010 Title V Permit.

- 76. Ingredion failed to take reasonable response steps to out of range pressure drop events at the baghouse controlling emissions at the Hammer Mill (5502-3), in violation of Condition D.2.7(a) of the 2010 Title V Permit.
- 77. Ingredion failed to record pressure drop readings at the baghouses controlling the emissions from the Hammer Mill (5502-3) and the Germ Bin (5503-2) on March 14, 2015, in violation of Conditions D.2.7(a), D.2.7(b), and D.2.10(c) of the 2010 Title V Permit.
- 78. Ingredion failed to timely calibrate or replace the instruments used for determining the pressure drop at the scrubbers controlling emissions from the #3 Starch Flash Dryer (40-2), #2 Starch Flash Dryer (40-3), #1 Starch Flash Dryer (40-4), #4 Starch Flash Dryer (575-1), #5 Starch Flash Dryer (575-2), #6 Starch Flash Dryer (575-3), #1 Spray Dryer (5549-1), and #2 Spray Dryer (5549-2) in violation of Condition D.1.10(e) of the September 2015 Title V Permit.
- 79. Ingredion failed to record fan amperage and a reason for the lack of a reading at the RTO (5502-1D), in violation of Condition D.1.14(i) of the September 2015 Title V Permit.
- 80. Ingredion failed to timely calibrate or replace the instruments used for determining the pressure drop at the baghouses controlling emissions from the DSE Bag Slitter (42-10), Corn Truck Dump (56-1), DSW Packing Fugitive Dust Collector (71-7), Hammer Mill (5502-3), Agglomerator (5549-13), #2 Fugitive Dust Collector (5549-20), and Line 1 Fugitive Dust Collector (5549-21), in violation of Condition D.2.8 of the September 2015 Title V Permit.
- 81. Ingredion failed to take corrective actions or response steps to an out of range pressure drop reading at the baghouse used to control emissions from the Blending Bin (152-15), in violation of Condition D.3.7 of the September 2015 Title V Permit.
- 82. Ingredion failed to timely calibrate or replace the instruments used for determining the pressure drop at the baghouses controlling emissions from the Starch Cooling and Conveying System (TF41818), Blending Bin (152-15), Starch Cooling and Conveying System (TF41820), and FBR1 Cooling System (TR31913), in violation of Condition D.3.7 of the September 2015 Title V Permit.

2017 IDEM Referred Violations

- 83. Ingredion failed to take corrective actions or response steps to an out of range pH reading at the first effect wash water system used to control emissions from the Feed Dryer (5502-1A), in violation of Condition D.1.9 of the June 2016 Title V Permit.
- 84. Ingredion failed to take corrective actions or response steps to an out of range water make up rate at the scrubber controlling #6 Starch Flash Dryer (575-3), in violation of Condition D.1.10(d) of the June 2016 Title V Permit.
- 85. Ingredion failed to record the pressure drop and take corrective actions or response steps to an out of range pressure drop reading at the baghouse controlling emission from the

Hammer Mill (5502-3) and Germ Bin (5503-2), in violation of Condition D.2.8 of the June 2016 Title V Permit.

- 86. Ingredion failed to record pressure drop and the reason for the lack of a reading across the baghouses controlling emissions from the Hammer Mill (5502-3) and Germ Bin (5503-2), in violation of Condition D.2.11(d) of the June 2016 Title V Permit.
- 87. Ingredion failed to record and maintain records of the pressure drop across the baghouses controlling emissions from the Hammer Mill (5502-3) and Germ Bin (5503-2), in violation of Conditions D.2.8 and D.2.11(d) of the October 2016 Title V Permit.

Environmental Impact of Violations

88. These violations have caused or can cause excess emissions of VOCs, PM, and SO₂, which are associated with the following:

Ozone: Breathing ozone contributes to a variety of health problems including chest pain, coughing, throat irritation, and congestion. It can worsen bronchitis, emphysema, and asthma. Ground-level ozone also can reduce lung function and inflame lung tissue. Repeated exposure may permanently scar lung tissue.

<u>Particulate Matter</u>: Particulate matter, especially fine particulates, contains microscopic solids or liquid droplets, which can get deep into the lungs and cause serious health problems. Particulate matter exposure contributes to:

- irritation of the airways, coughing, and difficulty breathing;
- decreased lung function;
- aggravated asthma;
- chronic bronchitis;
- irregular heartbeat;
- nonfatal heart attacks; and
- premature death in people with heart or lung disease.

<u>Sulfur Dioxide</u>: Current scientific evidence links short-term exposures to SO₂, ranging from 5 minutes to 24 hours, with an array of adverse respiratory effects including bronchoconstriction and increased asthma symptoms.

<u>Propylene Oxide</u>: Acute exposure to propylene oxide can cause eye and respiratory tract irritation. Acute exposure to high concentrations may cause headache, motor weakness, incoordination, ataxia, and coma.

Edward Nam

Director

Air and Radiation Division

CERTIFICATE OF MAILING

I certify that I sent a Notice of Violation, No. EPA-5-17-IN-12, by Certified Mail, Return Receipt Requested, to:

Melissa Putman Ingredion Incorporated 1515 South Drover Avenue Indianapolis, Indiana 46221

I also certify that I sent copies of the Notice of Violation by E-mail to:

Phil Perry, Chief, Air Compliance Branch PPERRY@idem.IN.gov

On the 22st day of September 2017.

Kathy Jones

Program Technician

AECAB, PAS

CERTIFIED MAIL RECEIPT NUMBER:

7009 1680 00007649 0582